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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,247	12/06/2001	Juergen A. Kortenbach	SYN-064B	5785

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EXAMINER

PANTUCK, BRADFORD C

ART UNIT PAPER NUMBER

3731

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,247

Applicant(s)

KORTENBACH ET AL.

Examiner

Bradford C Pantuck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13-15, 23 and 33-38 is/are rejected.
- 7) ☒ Claim(s) 5, 12 and 16-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/06/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 25-32 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: In the originally presented claims, Applicant claimed a clip applier and now Applicant claims a clip applier *and a clip*, which would require a new search.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 25-32 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-11, 13-15, 23, and 33-38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,354,312 to Brinkerhoff et al. Regarding Claims 1, 2, and 10, Brinkerhoff discloses a device capable of applying surgical clips, which has a hollow member (42) and a clevis (65) coupled to the distal end of the hollow member [see Column 4, lines 17-22; Fig. 3]. *The device is intended to be*

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used endoscopically [Column 1, lines 1-11]. There is a first jaw (46) rotatably coupled to the clevis (65), and a second jaw (48) rotatably coupled to the clevis (65) [Fig. 3; Column 4, lines 20-22]. The two jaws oppose each other, as shown in Fig. 2, and are able to apply a surgical clip. Brinkerhoff's invention includes a pull/push wire (54), which is coupled to the jaws (46, 48) and extends through the hollow member (42) to its proximal end [see Fig 2; Column 4, lines 23-31]. Wire (54) is capable of both pushing and pulling the jaws into respective open and closed positions [Column 4, lines 29-31].

Next, Brinkerhoff discloses actuation means (44, 56, 58) coupled to the proximal end of the hollow member and the proximal end of the push/pull wire. The actuation means moves the push/pull wire through the hollow member to cause the jaws to rotate between an open and a closed position [see Fig. 2; Column 4, lines 7-11]. *Both* of the jaws have a plurality of teeth (96), which are able to puncture and damage tissue adjacent to the surgical instrument [see Fig. 6; see Column 5, lines 57-50. For example, if the user presses the jaws together hard enough, the teeth will rupture tender body tissue.

3. Regarding Claims 3, 4, and 11 Brinkerhoff discloses a device capable of applying surgical clips, according to the claimed invention. Each jaw in his device has a clip guiding channel (94) with a hook shaped anvil (70) at the end of each respective channel [see Fig. 6]. The channel (94) is capable of grasping and guiding a clip, just as it is capable of grasping a "shaft 24" [Column 5, lines 1-4].

4. Regarding Claims 6 and 7, Brinkerhoff discloses a device capable of applying surgical clips, according to the claimed invention, with anvils (70) that have curved surfaces. One of the anvils' surfaces is curved about a single axis [see Fig. 6].
5. Regarding Claims 8 and 13, Brinkerhoff discloses a surgical clip applier, according to the claimed invention. Each jaw has a longitudinal axis and a vertical axis, perpendicular to the longitudinal axis. Each of the channels (94) is arranged at an angle relative to the vertical axis [see Fig. 6].
6. Regarding Claims 9 and 14, the angle formed between the clip guiding channel and the vertical axis in Brinkerhoff's invention is approximately 22 degrees *at a certain point in the arced configuration* [see Fig. 6].
7. Regarding Claim 15, Brinkerhoff discloses a device capable of applying surgical clips, according to the claimed invention, and as described above. Additionally, his instrument has a first linkage (66 and 68), which has a first element (66) that is rotatably coupled to the clevis (65) and coupled to the push/pull wire (54) and a second element (68) that is rotatably coupled to the first element [at point 69 in Fig. 2] and rotatably coupled to the first end effector (46) [see Column 4, lines 18-31].
8. Regarding Claim 23, Brinkerhoff additionally discloses that his instrument has a first and a second linkage (66 and 68), each of which is rotatably coupled to the clevis (65), coupled to a push/pull wire (54), and coupled to the first end effector (48 and 46). Each linkage provides mechanical advantage in rotating the end effector, because each linkage holds each respective jaw (48 or 46) further out on each jaw (48

or 46), which diminishes the mechanical work that must be done on each jaw to open and close it.

Allowable Subject Matter

9. Claims 5, 12, and 16-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 09/11/2003 have been fully considered but they are not persuasive. Brinkerhoff does not explicitly disclose that his device should apply clips, but Applicant's invention lacks novelty because Brinkerhoff *discloses all of the structure claimed* by the applicant. Applicant does not positively set forth a clip, and therefore Brinkerhoff need not disclose a clip. Each jaw in Brinkerhoff's device has a channel (94) capable of guiding clips. The channel is an enclosure and would enclose the clip on two sides if a clip were inserted into that space. Further, teeth (96) are considered to be jagged enough [from the view shown in Fig. 6] to be able to pierce tissue.

Regarding Claim 15, Brinkerhoff discloses all of the structure claimed by the applicant. Applicant should better claim the *structures that give the mechanical advantage*, or use functional language to convey the increased relative strength of Applicant's end-effector.

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Regarding Claim 23, Brinkerhoff's invention meets the claimed limitation.

Brinkerhoff's linkage elements (66, 68) are coupled to the clevis by means of the jaws (46, 48), which are directly connected to the clevis. Further, Brinkerhoff's linkages *do provide mechanical advantage*. In fact, Brinkerhoff's lever is a "Class III" lever, with an off-center pivot, as described in the attached reference [Kosmahl, University of Scranton, 2000]. Linkages (66 & 68) apply a moving force that is between the fulcrum (82) and the load (the center of mass of jaw 46 will be in about the middle of its length). Applicant's lever is also a Class III lever. The reason for having levers is that they give mechanical advantage. Applicant should note that *mechanical advantage does not necessarily mean supplying a greater force*. The principle of mechanical advantage can be used to employ a little force to lift a lot of weight, or a lot of force to lift a small weight that is close to the fulcrum.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradford C Pantuck whose telephone number is (703) 305-8621. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Milano can be reached on (703) 308-2496. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

BCP
BCP


MICHAEL J. MILANO
SUPERVISORY PATENT EXAMINER
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